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January 7, 2005

Via Electronic Mail and Certified Mail
Return Receipt Requested

Mr. Kevin Adler, Remedial Project Coordinator
U.S. Environmental Protection Agency, Region 5
Office of Superfund, Remedial & Enforcement Response Branch
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Subject: Granville Solvents Site Removal Action Quarterly Report – Fourth Quarter 2004

Dear Mr. Adler:

On behalf of the Granville Solvents Site PRP Group, Metcalf & Eddy of Ohio, Inc. respectfully submits the Quarterly Report for the Removal Action at the Granville Solvents Site. Copies have been sent to the following individuals:

Mr. Steve Acree, U.S. EPA (2 copies)
Mr. Peter Felitti, U.S. EPA (cover letter)
Mr. Fred Myers, Ohio EPA (1 copy)
Mr. Joe Hickman, Manager, Village of Granville (1 copy)

If you have questions regarding this submittal, please contact me at (614) 890-5501.

Respectfully,

METCALF & EDDY OF OHIO, INC.

Gerald R. Myers
Program Director

cc: B. Pfefferle, Baker & Hostetler – Steering Committee Chairman
W. Brewer, Duke University – Technical Committee Chairman

GRANVILLE SOLVENTS SITE
REMOVAL ACTION QUARTERLY REPORT
FOR OCTOBER, NOVEMBER and DECEMBER 2004

JANUARY 2005

Pursuant to the requirement set forth in the Administrative Order by Consent (AOC, August 7, 1994) between the U.S. EPA and the Granville Solvents Site (GSS) Potentially Responsible Parties (PRP) Group, in Section 2.5-Reporting, and the letter, dated February 14, 1996, from Ms. Diane Spencer (U.S. EPA), this report constitutes the quarterly written progress report concerning actions undertaken pursuant to the AOC.

I. PROGRESS MADE DURING REPORTING PERIOD

General

Approval was obtained from U.S. EPA to suspend operation of the groundwater and soil treatment systems, in accordance with the Granville Solvents Site Group's August 2004 proposal, conditional upon the submittal of a contingency plan.

Source Area Groundwater Control

The groundwater pumping and treatment system operated 744 hours in October, 720 hours in November, and approximately 672 hours in December, for a total of 2,136 hours during the fourth quarter of 2004. Since operation of the treatment system began in December 1994, the system has operated 98.8% of the available time.

The treatment system processed approximately 9.8 million gallons of water in October, 10.4 million gallons of water in November, and 10.0 million gallons of water in December, for a total of 30.2 million gallons of water for the fourth quarter of 2004. Since operation began in December 1994, more than 1.25 billion gallons of groundwater have been extracted and treated.

During the fourth quarter of 2004, M&E collected monthly air pressure measurements in the air-stripping unit's exhaust to calculate airflow values. The measured airflow was 1,476 cubic feet per minute (cfm) in October, 1,467 cfm in November, and 1,493 cfm in December.

M&E continued to perform scheduled monthly maintenance on the treatment system to ensure that the system is performing at maximum efficiency and to decrease unscheduled downtime. Maintenance included replacing bag filters, lubricating the transfer pump and blower motors, checking flow meters and level sensors, and performing acid washing of the treatment system.

Water samples were collected from the system's influent and effluent sampling ports on October 14, November 18 and December 13. The analytical results are presented in Table 1.

Well GSS-EW2 was operated for the entire quarter. A manual check of flow volume was conducted in October and again in late December. The October flow rate was determined to be 218 gallons per minute and the December flow rate was determined to be 248 gallons per minute. With the pumping of Village well PW-3, the groundwater divide, as shown in Figure 1, has moved westward from the location that was presented in the third quarter 2004 report, demonstrating that extraction well EW-2 continues to capture impacted groundwater.

An ice storm struck the Licking County area on Wednesday and Thursday, December 22 and 23. The electrical grid failed at 2:00 AM Thursday. As the widespread storm damage became known on Friday morning, coupled with the fact that power would not be restored for some time, and with temperatures forecasted to fall to between 5 and 10 degrees below zero, it was determined that to save the system from damage due to freezing it should be drained. The temperature in the building was 26 degrees on arrival. The piping connections were loosened at the low points to allow drainage and the sump of the Shallow Tray® air stripper was drained. The incoming water line was shut down also.

Power was restored sometime over the weekend and the system was put back into service Monday morning, December 27. There does not appear to be any damage to the system as a result of the storm, however the water meter did freeze. The Village has been contacted to schedule a replacement. Additionally, there are several trees which have fallen on the fence and will require removal.

TABLE 1
Monthly Influent/Effluent Sampling Results, µg/l

Constituent	Influent October 14	Effluent October 14	Influent November 18	Effluent November 18	Influent December 13	Effluent December 13
1,1,1-Trichloroethane	15	0.28 J	13	ND	13	ND
cis-1,2-Dichloroethene	1.5	ND	1.7	ND	1.8	ND
Tetrachloroethene	9	0.22 J	8	ND	10	ND
Trichloroethene	17	0.62	15	ND	15	ND
1,1-Dichloroethane	0.38 J	ND	0.47 J	ND	0.5	ND

Approximately 30.2 million gallons of water were processed in the fourth quarter of 2004. Based on these data, total VOCs of approximately 0.11 lb/day in October, 0.11 lb/day in November, and 0.12 lb/day in December were discharged to the atmosphere during this reporting period.

Groundwater Monitoring

Groundwater level measurements were collected on November 24. These data were used to develop a potentiometric surface map, included as Figure 1 with this report. Groundwater sampling for the quarterly event was completed on November 17-18. Table 2 summarizes the detected constituents and their concentrations.

TABLE 2
Quarterly Groundwater Monitoring Results, µg/L

Constituent	GSS-MW2	GSS-MW3	GSS-MW3D	GSS-MW4	GSS-MW5	GSS-MW6	GSS-MW7	GSS-MW8	MW-8	GSS-MW9	GSS-MW10	GSS-MW11	GSS-MW14
Acetone	ND	ND	ND	ND	ND	**0.55 J**	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	**5.7**	ND	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	**87**	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	**12**	ND	ND	ND	ND

ND – not detected

Source Area Soils

Source area soils are undergoing treatment utilizing air injection (AI), air sparging (AS) and soil vapor extraction (SVE). The treatment systems have been in operation since September 2000. The average flow rate for the SVE system this quarter was approximately 373 cfm.

A SUMMA canister sample of the SVE system influent was collected November 24. The results are provided in Table 3 below.

TABLE 3
Summa Canister Sampling
Detected Parameters

Compound	Concentration (ppmv)	Concentration (g/m^3)
Tetrachloroethene	0.190	1288
Trichloroethene	0.110	591
1,1,1-Trichloroethane	0.093	508
cis-1,2-Dichloroethene	0.0024	9.53
Totals	**0.395**	**2397**

ppmv – parts per million by volume

The total soil gas extracted by the SVE system for the quarter was approximately 46.8 million cubic feet. Approximately 7 pounds of VOCs were removed by the SVE this past quarter, and an approximate total of 358 pounds of VOCs have been removed by the SVE system since start-up. Mass removal estimates are based on PID readings and SUMMA canister samples obtained periodically from the SVE influent. The removal rate for the SVE system has remained well below the *de minimis* allowed quantity of 10 pounds per day throughout this quarter.

Active or Completed Tasks

The following specific tasks were completed during the reporting period:

- Collected water samples on October 14, November 18, and December 13, 2004 from the treatment system influent and effluent sampling ports;
- Collected the quarterly suite of samples from monitoring network on November 17-18, 2004;
- Collected water level measurements on November 24, 2004 and generated a potentiometric surface map based on these measurements;
- Continued to collect airflow data on a monthly basis;
- Collected a SUMMA canister sample of the SVE system influent on November 1, 2004;
- Continued to operate the AI system on a 3 hour on/3 hour off cycle.

II. DELIVERABLES (CURRENT PERIOD AND NEXT PERIOD)

CURRENT PERIOD:

Deliverable	Due Date	Delivered
Fourth Quarterly Report	January 7, 2005	January 7, 2005

NEXT PERIOD:

Deliverable	Due Date	Delivered
Draft contingency plan	January 31, 2005	
Response to OEPA comments	January 31, 2005	
First Quarterly Report	April 7, 2004	

III. DIFFICULTIES ENCOUNTERED REMEDIAL ACTIONS TAKEN THIS PERIOD

- The three-phase electric motor in the SVE system, which powers one of the two regenerative blowers, failed in October, with the result that the vacuum system is currently operating at 50% of capacity. The system can continue to operate in this condition by using all six vertical wells and the horizontal wells simultaneously, or by alternating the vertical wells monthly (three on and three off).
- An ice storm resulted in a system shutdown for four and one-half days in December.

IV. ANTICIPATED ACTIVITIES DURING NEXT REPORTING PERIOD

During the next reporting period, M&E will perform the following tasks:

- Collect potentiometric surface data on a quarterly basis;
- Collect a quarterly suite of samples from the groundwater monitoring network in February;
- Sample the treatment system influent and effluent water on a monthly basis;
- Perform scheduled maintenance of the treatment systems;
- Perform scheduled data collection for the treatment systems;
- Collect a SUMMA canister sample of the SVE effluent;
- Prepare draft contingency plan;
- Prepare post-shutdown groundwater monitoring plan;
- Prepare response to Ohio EPA's November 16, 2004 comments; and
- Prepare treatment system for shutdown:
  - Acid wash Shallow-Tray air stripper;
  - Clean piping between extraction well and treatment building; and
  - Store equipment.

E 4,500 E 4,000 E 3,500 E 3,000 E 2,500

LEGEND

* NOT USED IN CONTOURING

NM GROUNDWATER LEVEL NOT MEASURED

Nonresponsive map showing municipal well locations

N 5,000

N 4,500

SCALE IN FEET

0 100' 200'

PATH/FILENAME: P:\PROJ\Granville\CAD\potnov04.dwg
LAST UPDATE: December 28, 2004 @ 03:43:00 pm
PLOT DATE: January 03, 2005 @ 2:43:58 pm

Metcalf & Eddy

GRANVILLE SOLVENTS SITE

POTENTIOMETRIC SURFACE NOVEMBER 24, 2004

GRANVILLE, OHIO

FILE NAME	CHECKED	DRAWN	DATE	PROJECT NO.	FIGURE
potnov04.dwg	DMJ	JAW	1/3/05	016688	1